(71.2%) followed by cost of hospital stay (21.8%) and diagnostic costs (7%). Costs of hospital care for patients with ventricular arrhythmias were significantly higher as compared to patients with heart failure (€5890.82 and €1959.35, respectively). **CONCLUSIONS:** This study demonstrates that ARVC is associated with high hospitalization costs in Poland, mainly due to large costs of antiarrhythmic procedures.

PCV9

THE EFFECT OF ANTICOAGULATION FOR STROKE PREVENTION IN PATIENTS WITH ATRIAL FIBRILLATION—COMPARING EFFICACY AND EFFECTIVENESS

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OBJECTIVES: To investigate different scenarios of warfarin treatment for patients with non-valvular atrial fibrillation who are eligible to receive anticoagulation for stroke prevention. Scenarios include different proportions of eligible patients being treated, as well as the level of anticoagulation obtained (i.e. within and outside the recommended INR range). **METHODS:** A decision-analytical model was constructed from a third party payer perspective for the US. The model runs for five years in yearly cycles. Strokes (fatal, major, minor and no deficit) and bleeding events (fatal, intracranial, major and minor) were modeled. Probabilities and costs associated with events were taken from published sources. Four scenarios were compared: 1). 100% of eligible patients warfarin treated and all within the therapeutic range; 2). 100% of eligible patients' warfarin treated whereof 67% within and 33% outside the therapeutic range (randomized controlled trial-like); 3). 100% of eligible patients warfarin treated whereof 50% within/outside the therapeutic range (routine practice INR levels); and 4). 55% warfarin treated (of whom 50% within/outside recommended INR range), 5% no treatment, and 40% aspirin (routine practice for warfarin treatment rates and INR levels). **RESULTS:** At 5 years, total costs per patient (discounted at 3%) and the total number of strokes per 1000 patients (discounted at 3%) were for strategy 1: $8607 and 25, for strategy 2: $12,518 and 46, for strategy 3: $14,582 and 58, and for strategy 4: $15,480 and 129, respectively. **CONCLUSIONS:** In a real world setting, evidence demonstrates that patient's eligible for anticoagulation may not be treated, and those treated with warfarin may not be in the therapeutic range for anticoagulation. This will lead to marked differences between the observed efficacy and effectiveness as demonstrated for the number of strokes and costs in this model. This will need to be addressed in any cost-effectiveness analysis using warfarin as comparator.

PCV10

DRIVERS OF UNDERUSE OF VITAMIN K ANTAGONISTS IN PATIENTS WITH CHRONIC NONVALVULAR ATRIAL FIBRILLATION IN FRANCE: THE ENSEFAL STUDY

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OBJECTIVES: Describe prevalence and characteristics of patients with chronic nonvalvular atrial fibrillation (NVAF) and ≥1 risk factor (RF) for thromboembolism in France in 2004, and document reasons for vitamin K antagonists (VKA) underuse in those patients for whom anticoagulation is indicated. **METHODS:** Cross sectional study. All patients with arrhythmia or AF presenting to cardiologists (n = 43) from the THALES observatory during a 3-month period were evaluated via questionnaire. Statistical comparisons were by chi^2 and ANOVA analyses. Data were extrapolated using the THALES database to give representative national values. **RESULTS:** 409 patients met the inclusion criteria, i.e., confirmed NVAF and ≥1 thromboembolic RF (mean age 76 years; mean number of thromboembolic RF 2.11; 58.7% male). Of these, 37.2% had 1 RF, 28.9% had 2 RF and 34.0% had ≥3 RF. VKA was prescribed to 65.5% of patients. VKA treatment was associated with a higher mean number of RF (2.28) than aspirin (2.20) or no treatment (1.61). Among VKA-treated patients, 18.6% were judged difficult to stabilise/not stabilised by the physician. Main reasons for not prescribing VKA were insufficient risk: benefit (37.6%), patient's refusal due to VKA restrictions (23.4%) and patient's inherent haemorrhagic risk (19.1%). According to anticoagulation exclusion criteria (severe hepatic insufficiency, recent stroke, and patient's inherent haemorrhagic risk) most patients not treated with VKA (77.3%) would have been eligible for anticoagulation. Extrapolation of these findings to the French population equated to 426,731 (95% CI 420,099–433,363) patients with chronic NVAF. Of these, 147,124 (34.5%) would not be treated with VKA, even though 113,719 would have been eligible for anticoagulation. **CONCLUSIONS:** These data suggest that one third of French patients with chronic NVAF and ≥1 thromboembolic RF presenting to cardiologists are currently not treated with VKA. Main drivers for this non-prescription are more related to risk and constraints of VKA treatment than formal contraindications.

PCV11

ANTICOAGULATION IN PATIENTS WITH NON-VALVULAR ATRIAL FIBRILLATION: AN EVALUATION OF STABILITY AND EARLY FACTORS THAT PREDICT LONGER-TERM STABILITY ON WARFARIN IN A LARGE UK POPULATION

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OBJECTIVES: To determine the proportion of patients with non-valvular atrial fibrillation (NVAF) treated with warfarin that achieved INR stability. To then evaluate the associations between stability and outcome, and factors that predict stability. **METHODS:** A retrospective record linkage study in 1513 patients with NVAF treated with warfarin for a minimum of six months. The setting was a large UK population (≈450,000 people). The main outcome measures were stability defined as six consecutive months within the target INR range (2.0–3.0), thromboembolic and bleeding event rates, and mortality. Secondary outcome measures included the predictive value of baseline characteristics and other treatment variables. **RESULTS:** Stability was achieved in 52% of the study group. Standardised mean survival was significantly higher in the group who achieved stability ($\Delta = 16.9$ months, $p < 0.001$) with a hazard ratio of 4.36 ($p < 0.001$). The stable group had a lower rate of both thromboembolic events (0.8% vs. 2.3% per patient year) and major bleeds (0.4% vs. 1.2% per patient year). Failure to achieve stability was associated with age (odds ratio 1.01 (95% CI 1.001–1.021)) and morbidity at baseline (OR 1.015; 95% CI 1.007–1.022). Greater variability in INR was also associated with a failure to achieve stability (OR 1.518; 95% CI 1.427–1.615). Receiver operator characteristic (ROC) analysis using data from the first three month of treatment demonstrated good discrimination of stability using age and morbidity at baseline and percent time in range and frequency of visits during first three months treatment (AUC 0.780; SE 0.012; 95% CI 0.757–0.803). **CONCLUSIONS:** Many patients never achieved

a consecutive 6-month period of stability and were at increased risk of thromboembolic events and bleeding. Age, morbidity at baseline and variability of INR control in the first three-months predicted instability using warfarin.

PCV12

MANAGEMENT PATTERNS AND COSTS OF ATRIAL FIBRILLATION IN A LARGE COMMERCIALLY INSURED U.S. POPULATION

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OBJECTIVES: Atrial fibrillation (AF) remains a major health problem, affecting 2.2 million adults in the US with an estimated cost burden of $3 billion annually. Treatment approaches vary significantly and can include both interventional and pharmacologic options. The purpose of this research was to characterize the clinical and economic impact associated with AF. **METHODS:** Patients with continuous health benefit eligibility and a "new" diagnosis of AF (ICD-9-CM 427.3×) were identified from a large, geographically diverse administrative claims database in the US (N = 43 million) between 1 January 2000 and 31 December 2001 with a variable follow-up period of ≥6 months. Warfarin-treated (WT) (N = 6,846) and untreated (UT) (N = 40,849) cohorts were evaluated based on initial therapy associated with the AF diagnosis. Study outcomes included patient demography, treatment patterns and direct medical costs. **RESULTS:** The AF cohorts were comprised of 58.5% males with a mean age of 57.9 ± 15.8 yrs; mean duration of follow-up was ~20 months. WT was initially received by 14% of this AF cohort with only 37% receiving warfarin sometime during follow-up. The WT cohort spent approximately 34% of their study follow-up exposed to warfarin (average number of days on therapy = 206.5; average study duration = 608.7 days). Annualized AF-related costs were $10,560 ± 290 (WT) versus $10,131 ± 143 (UT). **CONCLUSIONS:** Significant proportions of AF patients do not receive pharmacotherapy. Furthermore, pharmacotherapy appeared to be sub-optimal among those who received it. Better management of AF pharmacotherapy or uses of newer therapies that provide appropriate anticoagulation are necessary to reduce the burden associated with this costly disease.

PCV13

EPIDEMIOLOGY AND COSTS OF ATRIAL TACHYARRHYTMIAS

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OBJECTIVE: Atrial Tachyarrhythmias (ATs) currently represents a major economic burden for society. Italian data on epidemiology and hospital costs of (ATs) are lacking. **METHODS:** Prospective systematic evaluation of all consecutively Emergency Room (ER) admitted patients with a diagnosis of AT in the Alessandria, Novara, Novi Ligure and Tortona Hospitals from November 2004 to January 2005. A group of clinicians and economists developed an ad-hoc questionnaire in order to collect data on hospital resources consumption. **RESULTS:** A total of 201 patients were enrolled in the study (mean age: 66.2 „b 15.4), of which 48.8% was male. Most of the patients (80.4%) were admitted the ER in the first 48 hours after the AT event. Out of the 201 patients (44.3%) declared that was their first AT episode. At the moment of the event 46.7% of the patients were not assuming any pharmacological therapy, 21.9% were assuming anti-aggregate, 7.5% anticoagulant, 39.8% anti-arrhythmic drugs and 5% were already implanted with a Pacemaker. A total of 818 diagnostic test and therapeutic procedures were performed, which means, on average, 4.1 per patient. The most performed were ECG followed by blood test, pharmacological cardioversion, chest X-ray, in-hospital ECG monitoring, 24-hour holter monitoring, and external cardioversion. Out of the total patients, 148 were discharged from the ER, 31 patients were hospitalized in the "department of short-term observation" (average length of staying (LOS): 1.3 days), 8 patients were hospitalized in the cardiological department (average LOS: 7 days), 12 were hospitalized in other departments (average LOS: 4 days) and only 2 patients had different destination. **CONCLUSIONS:** This study shows that ATs, even if they are not life-threatening diseases and most patients are discharged directly from ER, absorb a relevant amount of hospital resources. Future economic evaluation of this data will highlight also the impact of ATs on the hospital and NHS expenses.

PCV14

THE COST OF ANTICOAGULATION MONITORING SERVICES IN THE UK NATIONAL HEALTH SERVICE

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OBJECTIVES: To establish the current level of resource utilisation required to monitor International Normalised Ratio (INR) levels in patients treated with warfarin in the UK National Health Service. **METHODS:** Monitoring services in areas associated with six secondary care Trusts were studied. Accurate descriptions of services were obtained through one-to-one semi-structured interviews with NHS staff involved in the delivery of anticoagulant monitoring. Due to the complexity of the different systems, where possible, resource use was divided into the 3 main steps: taking blood (including transport of patients and/or bloods), INR analysis, and the communication of results and warfarin dose changes. Costs associated with running the service were identified and sourced from local settings or NHS reference costs as appropriate (2004 prices). **RESULTS:** The six monitoring services were responsible for an average of 3459 (Range 1422–4500) warfarin patients, with a mean frequency of INR monitoring of 14.2 times per year (SD 3.4). The average cost of a monitoring visit was £14.58 (SD 4.25), of which £6.88 as associated with taking bloods, £4.08 with analysis and £3.62 with communication of results and dose changes. The mean annual cost per patient of INR monitoring was £206.41 (SD 63.51). Three of the services had separate hospital and primary/shared care models of INR monitoring. In these services the cost per INR test tended to be lower in the hospital based model (Mean £13.39) than in models that included primary care (Mean £23.06). **CONCLUSIONS:** The cost of INR monitoring varies according to setting and system. Where monitoring involves primary care, it tends to be more costly than systems in which hospital anticoagulation clinics control monitoring and warfarin treatment. This may be due to economies of scale and the ability of specialist clinics to deal with the monitoring process more efficiently.